

What cognitive tests measure and could tell us about Biden and Trump

Cognitive tests can be used to rule out impairment associated with Alzheimer’s disease and stroke but do not measure intelligence.

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Doubts about the mental fitness of [President Biden](#) and [Donald Trump](#) to hold the White House in their 80s have highlighted tests that could reveal whether an older adult is experiencing cognitive decline.

Biden has not taken a cognitive test during his presidency and dismissed calls to take one arguing during his recent ABC News interview that leading the country amounts to a daily test. Trump has bragged about passing a short screening test in 2018, and his personal physician said last year that his cognitive exams were “exceptional” but did not explain what those exams entailed and when they were conducted.

Sen. Lindsey Graham (R-S.C.) and Rep. Adam Schiff (D-Calif.) on Sunday said both Biden and Trump should take cognitive tests.

Such tests offer some useful information, but they also have limitations.

“People need to understand that cognition isn’t one thing. It’s really a set of different abilities,” said Charan Ranganath, a professor of psychology at the University of California at Davis. When asked about the call for elected officials to undergo cognitive testing, Ranganath said: “It’s quite possible, maybe even likely, that you’re not going to get a clear-cut answer here. The tests are going to be much less informative than functioning in the real world.”

What are cognitive tests

An array of simple cognitive screenings exist that take minutes to answer straightforward questions and perform basic tasks such as copying shapes. The preliminary tests do not involve MRIs or other brain scans.

A Mini-Cog is one of the simplest tests. It involves repeating three words, drawing a clock, then recalling the three words to test cognitive functions such as memory.

The Montreal Cognitive Assessment, known as [MoCA](#), is one of the most prominent tests and the one Trump took. Patients [may be asked](#) to repeat phrases such as “The cat always hid under the couch when dogs were in the room” or name animals in drawings.



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If a patient scores poorly on such preliminary exams, they can be referred for more extensive neurocognitive testing, such as the Cambridge Automated Neuropsychological Test Battery. That test includes 25 computerized cognitive tasks such as identifying emotions associated with facial expressions and recalling which patterns appeared in a set of boxes.

Ishani Ganguli, a primary care physician and associate professor of medicine at Harvard Medical School, said people often “put too much faith in a single test.” In reality, doctors often combine the results of a cognitive test with other information such as familial accounts of the patient’s behavior and brain MRIs to make diagnoses.

Who should take a cognitive test

There’s some dispute over whether older adults should receive cognitive tests during routine checkups or only when they are already showing signs of mental decline.

An extensive [research review](#) by the U.S. Preventive Services Task Force, which influences how health providers and insurers handle screenings, concluded that there is insufficient evidence to recommend that all adults 65 and older undergo cognitive tests if they show no symptoms of decline. However, the American Academy of Neurology [recommends](#) all people in that age group receive yearly cognitive screenings, which the group says are key to recognizing mild impairment.

Symptoms of mental decline include forgetfulness, trouble maintaining focus or processing information, repeating questions and struggling to articulate desired words, according to the [Cleveland Clinic](#).

Medical experts [previously told](#) The Washington Post that the verbal stumbles by Biden and Trump, such as mixing up proper nouns and trouble retrieving words, can simply be the normal workings of an aging brain without revealing a deeper problem such as dementia or other cognitive decline.

“I worry less about word-finding problems,” said Earl K. Miller, professor of neuroscience at the Massachusetts Institute of Technology. “I worry more about the kind of long, rambling speeches that get divorced from reality.”

Still, Ziad Nasreddine, a Canadian neurologist who created the MoCA test, and three former employees in the White House medical unit [have said](#) Biden’s halting performance suggests he should undergo cognitive screening.

What the results don't show

The MoCA test is designed to evaluate short-term memory, visuospatial abilities, executive functions, language and orientation. It can be used to rule out the impairment associated with Alzheimer's disease, stroke and other conditions. It cannot rule out underlying mental health problems such as depression and narcissistic personality disorder because it is not a psychological exam.

In his first reelection campaign, Trump bragged about acing that test and challenged Biden to also take the test. In doing so, he inaccurately described the assessment as an intelligence test and distorted the kind of questions that are asked.

Very low scores on cognitive tests usually signal some brain impairment, but a high score does not rule out impairment, according to the Cleveland Clinic. The results can't explain the conditions or reasons for impairment.

"They're not all-encompassing. It can be informative, but not give you all the information you need to take the next step, whatever that may be," said Courtney Marshall, assistant professor of neuroscience at Wellesley College.